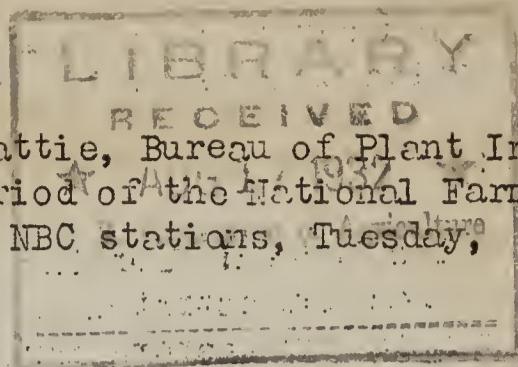


## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



THE GARDEN CALENDAR.



A radio dialogue by D. F. Fisher and W. R. Beattie, Bureau of Plant Industry, delivered in the Department of Agriculture period of the National Farm and Home Hour, broadcast by a network of 49 associate NBC stations, Tuesday, July 26, 1932.

ANNOUNCER:

Well, Farm and Home Hour folks, this is Tuesday and time for our garden calendar notes by Mr. W. R. Beattie! Today Mr. D. F. Fisher, in charge of the fruit and vegetable storage and transportation work of the Department is here with Mr. Beattie and you are to hear about what the Department is doing to improve the methods of getting some of our most perishable fruits and vegetables to market in good condition. Mr. Beattie, will you lead off?

BEATTIE:

Yes, Mr. Salisbury and I often wonder if the Farm and Home listeners know of all the wonderful changes that have taken place during recent years in the handling of fruits and vegetables. For example, here are some great big juicy cherries that I bought on the market this morning. These cherries look as though they might have been picked from the tree yesterday. Try them, won't you Mr. Salisbury, and you too, Mr. Fisher? Aren't they nice? Perhaps, Mr. Fisher, you can tell us where these cherries came from.

FISHER:

Probably from the State of Washington.

BEATTIE:

That's a long distance. How do the shippers get cherries clear across the continent in such splendid condition?

FISHER:

By fast refrigerator express. I presume these cherries were at least five days on the way from Washington State to the City of Washington.

BEATTIE:

Five days! But, I suppose the shippers of these cherries take every possible care and precaution in handling them before they are shipped.

FISHER:

Indeed they do. In the first place they pack only perfect cherries, picked with stems attached. Then they lose no time in the packing shed and thoroughly precool most of the fruit before loading it into the refrigerator cars.

(over)

BEATTIE:

You say they precool the fruit. Have you tried the precooling method on other fruits that are shipped under refrigeration?

FISHER:

Yes indeed! For instance take the work of Mr. C. W. Mann of our office. Mr. Mann has demonstrated that by proper precooling California oranges can be delivered to our eastern markets with only one reicing in transit as compared with ten or twelve reicings by the old method.

BEATTIE:

Say, that's some difference. But, how in the world do you do it?

FISHER:

Just as simple as falling off a log. You see by the old method the orange growers picked the hot fruit from the trees, packed it and loaded it into the refrigerator cars, depending upon its cooling in the cars on the way to market. As a matter of fact the fruit cooled very slowly and it took tons and tons of ice to get the carload of fruit cool. By our new method we cool the fruit in special cooling rooms before loading it into preiced cars that are already cold. Or we use a portable precooling apparatus that we have developed to cool the fruit in the cars after loading. The precooling takes all of the orchard heat out of the fruit. The ice bunkers of the cars are completely refilled and the shipment is started on its long journey. As I said a moment ago, only one reicing of precooled citrus fruit is now required on the way from California to the East.

BEATTIE:

Say, I'll bet that saves a lot of time and expense for reicing.

FISHER:

It certainly does. In fact it saves upward of \$30. a car or a potential saving of \$500,000 to \$1,000,000 annually for the California orange growers.

BEATTIE:

Are the precooled oranges in good condition when they reach the consumer?

FISHER:

Yes. In fact they are in better condition than under the old method for the precooling of the fruit makes it keep better.

BEATTIE:

How did you discover this new process, Mr. Fisher?

FISHER:

By studying refrigerator car temperatures in transit. Our men rode the fruit trains clear across the country and took temperature readings every few hours. They used electric thermometers which could be read from the tops of the

cars. This gave us a complete picture of what goes on in refrigerator cars in transit and indicated the need for quicker cooling of the fruit.

BEATTIE:

Have you done similar work with the steamship transportation of fruits and vegetables?

FISHER:

Yes indeed. Our men have accompanied several steamer shipments of oranges from California, through the Panama canal, to Europe, taking temperature readings of the cargo every few hours. The same work has also been done with apples from the Northwestern States and from the Atlantic Coast.

BEATTIE:

Have you tried precooling other fruits besides those you have mentioned?

FISHER:

Yes, we've tried precooling shipments of Bosc pears from Oregon and it has resulted in a saving of about \$90 a car, or over \$100,000 to the Northwestern pear industry. In addition the pears reach the market in just about the condition desired by the dealers with no extra expense for conditioning the fruit before offering it for sale.

BEATTIE:

Strawberries are a hard fruit to handle, and I just have an idea that the precooling process would work mighty well in shipping strawberries.

FISHER:

Yes it does. During the past two years we have demonstrated that when strawberries are thoroughly precooled in Florida and then shipped by refrigerator express to Northern markets it is not necessary to reice the cars in transit. This results in a saving of \$20 to \$25 a car on ice consumption.

BEATTIE:

I suppose that would hold true for other small fruits?

FISHER:

Yes, it applies to the long-distance shipment of raspberries, dewberries and all of the more perishable fruits during the cooler portions of the year at least.

BEATTIE:

That's fine. It seems to me that the producer, the transportation companies and the consumer would all benefit from your work. Now, Mr. Fisher, just briefly, what are some of the other fruit and vegetable handling problems that you are working on?

1200 - 1200

1200 - 1200

1200 - 1200

1200 - 1200

1200 - 1200

1200 - 1200

1200 - 1200

1200 - 1200

1200 - 1200

to store the fruit, but the store equipment will come as the popularity of the frozen product increases.

BEATTIE:

That certainly sounds interesting. I suppose the grocer might deliver the frozen dainties packed with the so-called dry ice to keep them frozen until I wanted to use them?

FISHER:

That could be done but would hardly be necessary because you want the products to thaw out before you use them. Speaking of dry ice, which by the way is nothing more or less than solidified carbon dioxide gas, Dr. Charles Brooks of our section has developed a method of preventing the shattering of grapes during marketing by treating the fruit with carbon dioxide gas.

BEATTIE:

That's a brand new idea isn't it?

FISHER:

Yes, and it appears certain that Dr. Brooks' method, if generally applied, will effect a saving of at least \$100,000 annually.

BEATTIE:

You seem to be talking in terms of big figures today, Mr. Fisher.

FISHER:

Yes, the figures are large but we're dealing with big industries. Take the work of Dr. Rose and Mr. Lutz who investigated the so-called freezing damage in the bottoms of cars of pears and apples shipped across the country. Much of this damage has been laid to freezing in transit and the railroads have had to pay heavy claims. As a result of our investigation it was found that this damage attributed to freezing was really due to a type of bruising of the fruit nearest the floor of the cars as they jolted over uneven rail joints -- "low jints" the section boss would call them.

BEATTIE:

I suppose you found a method of overcoming this bruising?

FISHER:

Oh yes, by lining the boxes with a resilient corrugated cardboard the damage can be almost entirely eliminated with a possible saving of over \$200,000 a year.

BEATTIE:

It seems to me you and your group of workers have a big job on your hands.

FISHER:

Yes, and we have only touched the possibilities in the saving of waste and loss in the storage and handling of perishable fruits and vegetables.

